

PLANTING CLEAN SEED REDUCES COST OF WEED CONTROL

Planting crop seeds mixed with foul seeds has been one of the chief causes of our present serious weed problem.

Clean all seed thoroly before planting, regardless of where grown.

Before purchasing seed, make sure that it contains no noxious weed seeds. To be safe, clean the seed before planting.

Mixture of varieties in small grains results in discounts when grain is sold. Plant pure seed varieties to secure the best price.

One of the common sources of introducing weeds on the farm is chicken feed mixtures or screenings. Frequently these contain seeds of weeds from other states. The seeds may be unbroken even if such screenings are ground. Buy only such mixtures as show no whole seeds, or grind screenings in your own mill to be sure that no viable weed seeds are fed to hogs or chickens. Manures may contain living weed seeds unless they have been thoroly rotted. It is best to adopt a practice of handling manure that will allow weed seeds to be killed by rotting before the manure is scattered onto fields.

Quack Grass seed that is commonly spread in grain or hay chaff is easily killed by allowing it to lie moist in manure heaps through one summer. Hauling litter directly onto fields is not advisable because it allows many living weed seeds to reach the soil.

Quack grass should be cut for hay before any pollen appears. This will prevent viable seed from being formed.

Any resident of Minnesota may have a total of ten seed samples analyzed in one year for purity and germination, free of charge. Send seed samples to the **Minnesota Seed Laboratory, University Farm, St. Paul, Minnesota.**

BE ON THE LOOKOUT FOR THE NOXIOUS WEEDS LISTED BELOW. KILL THEM WHEN YOU FIND THEM.

SOW THISTLE is a perennial weed which in the spring resembles dandelion. About June 20, stalks shoot up sometimes to a height of six feet and bear yellow flowers similar to the dandelion. Its sap is milky. This weed grows in patches like Canada Thistle.

AUSTRIAN FIELD CRESS resembles horse-radish. The roots are longer and more slender. The leaves are smaller. It grows very thickly and produces few seeds. This weed is spread chiefly by root fragments. Its flowers are small and yellow and bloom about May 20.

BUFFALO BURR (Prickly Nightshade) grows from seed each year to a height of about two feet. The stems and leaves are covered with spines. The leaves resemble watermelon leaves. The flowers are yellow like tomato flowers but larger. The seed pods are covered with spines. When mature, the plant breaks from its roots and rolls like a Russian Thistle.

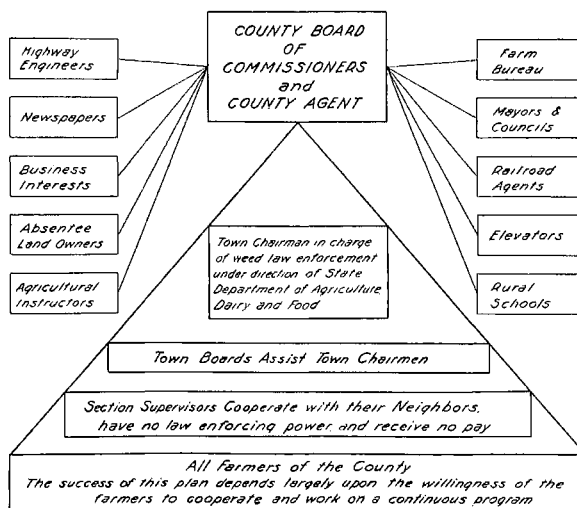
- **HOARY ALYSSUM** is a winter annual mustard that seriously crowds crops in meadows and pastures. Livestock will not eat it, and its seeds live many years in the soil. The flowers are small and white. It has a tap root from the crown of which numerous stems about two feet long may grow out and cover a considerable area. The leaves are about two to four inches long and strap-shaped. Their surfaces are covered with numerous branched stiff hairs that give them a gray color. To control, plant only summer annual crops on infested areas.

If you find any strange weeds which you wish to have identified, send a complete specimen (roots, stems and leaves) to your **County Agent** or to the **Division of Plant Pathology and Botany, University Farm, St. Paul, Minnesota.**

EVERYONE COOPERATE!

Destroy Noxious Weeds

*REDWOOD COUNTY COOPERATIVE PLAN OF WEED CONTROL
BASED ON THE ASSUMPTION THAT WEEDS
ARE ENEMIES THAT EVERYONE MUST FIGHT*



If it is impossible to eradicate large patches of weeds at once, prevent the patch from enlarging by killing all stray plants at the edges of the infested area. Do not drag roots or seeds from the infested area onto clean soil by cultivators. Reduce the area of infestation as rapidly as possible by working in from the edges. Fence rows are a common source of reinfesting fields. Old fence rows should be plowed and cultivated and reseeded to blue grass. Movable fences are desirable where it is necessary to eradicate by black fallow followed by a clean cultivated crop. Remove rocks, stumps, and trees from cultivated areas to stop from spreading, weeds that grow around them. Weeds on ditch banks should be cut before they bloom.

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CANADA THISTLES are known by their prickly leaves, lavender or white flowers, and faun-colored, downy seed heads. The root is perennial and throws up shoots through two feet of soil. Seeding must be prevented by cutting when the bloom first appears. Seed blows for miles. Canada Thistles can be controlled by seeding to alfalfa on suitable soils. In wet places sow reed canary grass. Mowing prevents the formation of seed, and shading by thick alfalfa will starve out the plants in two or three years. Along fence rows and in stony ground use sodium chlorate.

ROADSIDE THISTLES generally produce a flat bunch of leaves during the first year and seed in the second year. Kill them by cutting out the crown with a spade, removing the root to a depth of eight inches or more.

RUSSIAN THISTLE is a tumbling weed that scatters its seeds broadcast when it rolls in the wind. The rolling plants are stopped by fences, etc., and should be burned. The plant appears mostly to be made up of stems with prickles. Clean cultivation when in the seedling stage is the best means of eradication. The seed is most commonly found in alfalfa seed produced in the West. Early tillage of the grain fields after harvest is recommended.

DODDER forms an orange or yellow vine-like parasitic growth on the stems and tops of plants about which it twines. It appears as an orange string-like stem without leaves. After sprouting to a few inches in height, it wraps around stems and leaves from which it draws its nourishment. It has no roots. If areas of the crop are cut off and dried, the dodder also dies. Prevent its introduction by using clean seed. Cultivation of the soil will kill it only before it becomes established on crop plants. Do not sow broadleaved crops on infested areas for five or six years. Usually it is associated with alfalfa, clover, and flax.

OXEYE DAISY is a perennial white daisy. Many seeds are produced in each head. Cattle do not eat it, so it persists in pastures. Clean cultivation of check-rowed corn will eradicate it. Seeds live in soil for many years.

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WEEDS

STOP

the spread of noxious weeds.

LOOK

for dangerous new weeds.

LISTEN

and learn how to control them.

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AGRICULTURAL EXTENSION DIVISION

PLAN A DEFINITE PROGRAM FOR EACH YEAR TO REDUCE ESTABLISHED INFESTATIONS OF QUACK GRASS, CANADA THISTLE, SOW THISTLE, LEAFY SPURGE, FIELD BINDWEED, AND OTHER PERENNIAL NOXIOUS WEEDS.

Black fallow for varying periods of time controls quack grass, Canada thistle, and other perennials. Black fallow means the use of tools or machinery to cultivate the soil so that no green leaf or shoot is allowed to reach the surface of the soil.

Spraying with chemicals often completes the eradication of small patches of noxious weeds that survive fallowing.

Sodium chlorate should be applied at the rate of two pounds per square rod, sprayed on from a solution of one pound of the chemical per gallon of water. Sodium chlorate can form a fire hazard and may produce highly combustible mixtures with any organic matter, such as straw, chaff, or stubble. Treated areas should be fenced off from cattle. Do not walk through them until a rain has washed the salt into the soil. Never allow chlorate to dry on clothing. Wash it before it is dry.

Sowing alfalfa on patches of Canada thistle and sow thistle helps control them but has no effect on quack grass or leafy spurge.

CUT, PLOW UNDER, OR SPRAY NOXIOUS WEEDS WITH CHEMICALS BEFORE THEY FORM SEEDS.

Preventing production of weed seeds reduces the hazard of further infestation on your own and neighboring farms. Some weeds must be cut before full bloom to prevent the seed from maturing after the plant is cut. Sow Thistle and French Weed are in this class.

For information concerning weed eradication and crops that aid in weed control see your **County Agent** or write to the **Division of Agronomy and Plant Genetics, University Farm, St. Paul, Minnesota.**

This archival publication may not reflect current scientific knowledge or recommendations.
Current information available from University of Minnesota Extension: <http://www.extension.umn.edu>.



LEAFY SPURGE

Leafy Spurge is a hardy, persistent, deep-rooted perennial weed that requires at least two years black cultivation to kill. Animals will not eat it because it has a bitter, sticky and milky sap. Leafy Spurge has tough woody roots that are considerably branched and live from year to year. Several new shoots may start from almost any part or piece of the roots. Numerous seeds are produced. The stems and leaves of this plant resemble flax, but they are somewhat larger. The flowers appear yellowish-green and occur in bunches at the top of the stem which may grow four feet high.

CONTROL: The simplest method of controlling Leafy Spurge is to eradicate all small patches when they are first noticed. Completely covering such patches with a layer of common salt or several thoro drenchings with a solution of one pound of sodium chlorate per gallon of water may be required to kill Leafy Spurge. Large patches should be fallowed for at least two or three years. No cropping system will kill Leafy Spurge.



Courtesy Division of Botany, U.S.D.A.

FIELD BINDWEED

Field Bindweed (Creeping Jenny) is one of the most rapid-spreading and obstinate weeds. It is a perennial morning glory and usually trails along the ground, but may twine around other crop plants, thereby choking them out. The small pink or white funnel-shaped flowers are about one inch in diameter. The leaves are shaped like blunt-pointed spear heads. The many-branched roots penetrate deeply into the soil and live from year to year. New plants may start from any part or piece of the root.

CONTROL: Preventing field bindweed from getting established on your farm is the best method of control. Kill it as soon as you find it. A heavy layer of common salt placed on the soil around the plants or several heavy drenchings with a sodium chlorate solution is recommended for killing small patches. Vigorous black fallowing for two or three years will control large patches. After most of the weeds are killed, the small remaining patches can be treated with chemicals. Sheep will eat bindweed and "keep it down."



COMMON BARBERRY

Common Barberry spreads black stem rust to wheat, oats, barley, and rye. This disease lowers the quality as well as the yield of small grains. Shrunken, rusted grain is always discounted when sold. Control rust and increase your net returns from grain acreages. Originally this shrub was planted as a shrub around houses, but now it may be found wherever any shrub can grow. It is an erect bush, has leaves with saw-toothed edges, spines in groups of three or five, gray-colored outer bark, yellow inner bark, yellow roots, and bright red oval berries borne in bunches like currants. The seeds are spread by birds to groves, woodlots, fence rows and other uncultivated places, resulting in the development of many escaped rust-spreading barberry bushes.

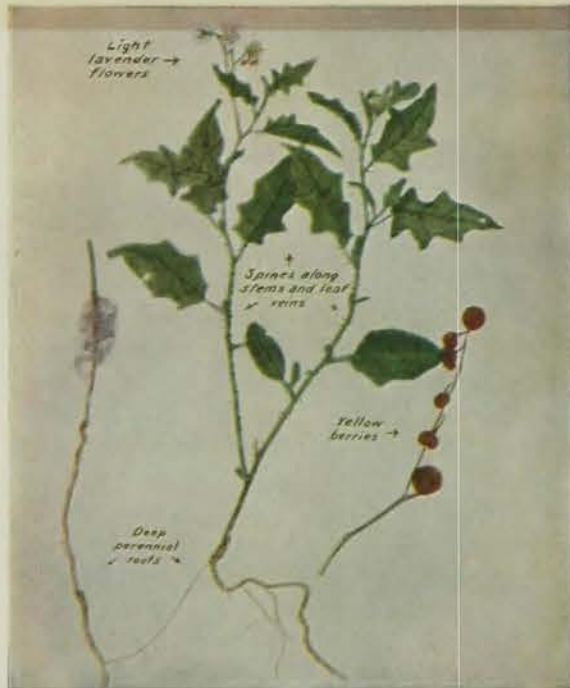
CONTROL: Common salt applied to the base of a bush kills it quickly and prevents sprouting. Report the location of every common barberry found, to the **County Agent** or to the **Barberry Office, University Farm, St. Paul, Minnesota.**



FRENCH WEED

French Weed (Stink Weed) has an odor like garlic that taints milk and cream so that creameries do not like to accept them. Therefore, hay and pasture containing this weed are detrimental when fed to milk cows. French Weed will crowd out alfalfa and small grains. It is an annual weed and may start growing in the fall or spring. The plants have small white flowers and may grow two feet high. The seed pods are fan-shaped (similar to elm seeds) and measure about three-eighths of an inch in diameter. When ripe the leaves drop off and the pods and stems become straw-colored. The seed of French Weed may lie in the soil for many years before sprouting.

CONTROL: The dry material on infested soil should be burned before the land is plowed. Shallow plowing is recommended. Stirring the soil stimulates seed germination and kills the seedlings as they appear. When spring grain is about three inches high, use a weeder to kill the weed plants. The use of rotations including such cultivated crops as corn and potatoes helps to control French Weed.

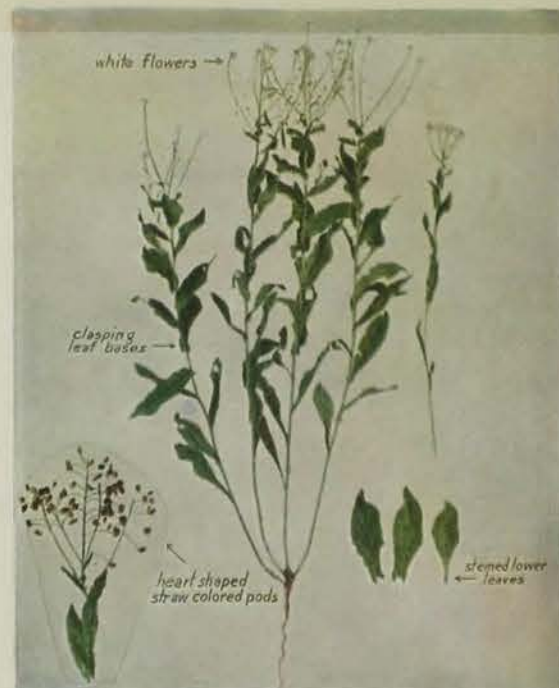


HORSE NETTLE

Horse Nettle is a perennial and grows in patches like Canada Thistle. Its leaves are shaped somewhat like white oak leaves. The flowers are pale violet and resemble tomato flowers. This weed has coarse, yellow spines on the stems and under side of the leaves. The berries are orange-yellow in color when ripe and are about one-half inch in diameter. Each fruit contains several hundred seeds. Immature seeds from green fruits will germinate. Seed is introduced into this state mostly in feeds that are shipped in from states farther south, where it is a very common weed.

CONTROL: The plants winterkill as deep in the soil as the frost penetrates. It is advisable to plow as deeply as possible just before the soil freezes and leave the furrows lying loose to favor deep freezing. Sodium chlorate solution, one pound of the chemical per gallon of water, should be sprinkled over the shoots as soon as they appear, using four gallons per square rod on thick patches.

Color plates furnished through the courtesy of the Conference for the Prevention of Grain Rust, 300 Lewis Building, Minneapolis, Minnesota.



PERENNIAL PEPPER GRASS

Perennial Pepper Grass is a noxious mustard. Growth starts early in the spring, and seeds are ripe by the middle of June. Its height is about two feet. The flowers are white and in dense clusters that lengthen as they mature. The fruits are about one-fourth inch broad and heart-shaped. The upper leaves clasp the stem, are more or less strap-shaped, about two to three inches long, with a few coarse teeth along their edges and the surfaces covered with hairs that make them appear grayish-green. The basal leaves are spoon-shaped, have toothed edges and hairy covering, but are about four to five inches long. It appears that this weed when eaten by cows on pastures that are infested with it causes tainted milk. Perennial pepper grass is difficult to control.

CONTROL: To eradicate it one must carry on a black fallow for two or more years. This should be followed by a thick smother crop, such as Sudan Grass, the year after the bare fallow is ended. It is highly resistant to chlorates. A few infestations are known in Minnesota. Often the seeds are found in western alfalfa seed.